REMARKS

Claims 1-11 are pending in this application. Claims 12-14 are withdrawn. Claim 1 is amended to recite that the comminution apparatus is for reducing a particle size of a "metallic feed" material. See, for example, paragraph [0005] of the Specification. Additional, minor amendments are made herein to claims 1 and 2 to better describe the claimed subject matter as supported in the specification and the claims. No new matter is added by way of these amendments. All amendments are made without prejudice or disclaimer.

A. Rejection of claims 1, 2, 4, 5, 10, and 11 under 35 U.S.C. § 103(a)

Claims 1, 2, 4, 5, 10, and 11 are rejected under 35 U.S.C. § 103(a) as having been obvious in light of U.S. Patent No. 6,827,304 to Rousseau (hereinafter, the '304 patent) and U.S. Patent No. 4,678,126 to Prentice *et al.* (hereinafter, the '126 patent). Applicants respectfully disagree for at least the reasons that the art cited is non-analogous, there is no motivation to combine the references, and, in fact, such a combination is based on impermissible hindsight.

As an initial matter, Applicant notes that the cited references are from non-analogous art. As stated in the MPEP § 2141.01(a), "[i]n order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). It is clear that the '304 patent is not pertinent to the problem of metal comminution because it is directed to a hay chopper for animal

feed. Notably, hay chopping is not in the field of endeavor of the Applicant's invention, and, thus, no one of skill in the art would seek guidance on the problems appertaining to comminuting metallic feed material by reviewing the literature related to hay choppers. In fact, although the office action characterizes the '304 device as a machine for comminution, there is no reference to comminution in the '304 patent. Moreover, the specification explains that a "comminution apparatus" is a machine that pulverizes a material to fine particles or powder. See, for example, the Specification at paragraph [0001]. Devices for hay chopping do not pulverize hay, or metallic material for that matter. Thus, the '304 patent, which is relied on for six of the claimed elements, is non-analogous art, and may not be used in combination with another reference to establish an obviousness rejection in the field of metal comminution.

In addition, the '126 patent is directed to a shredder. Shredders are not within the field of endeavor of the Applicant's invention because shredding only creates "threadlike or stringy pieces" of matter. See, for example, the world wide web at unabridged.merriam-webster.com/; visited 3/24/2006; "shred." Further, the '126 patent is concerned with shredding "wood, tires, brush, etc." that may or may not contain rocks. See, the '126 patent col. 3, lines 34-47. Thus, shredding is not reasonably pertinent to the problem to be solved (galling and smearing of certain metallic materials during comminution) as disclosed by the Applicant. Consequently, the '126 patent is also non-analogous art and may not be used to develop an obviousness rejection in the present application.

Even assuming for the sake of argument that the cited references are in analogous fields, Applicants note that there is no motivation to combine these

references. Neither the features of the hay chopper of the '304 patent nor the features of the shredder of the '126 are known or disclosed to be useful for comminuting metallic feed material. "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art." MPEP § 2143.01. Here, there is no teaching or suggestion in any of the cited references how to prevent metallic feed material from smearing and galling during comminution.

The office action asserts that the motivation to combine the references is solely to "improve the cutting efficiency in the direction of rotation." Applicants respectfully disagree. The problem to be solved is to design an apparatus that not only efficiently comminutes metallic feed material (which produces prodigious amounts of heat), but also to simultaneously inhibit the hot metallic feed material from galling and smearing. The solution discovered by the present inventor is to include in the apparatus both blade teeth having a positive rake and a chamber in a V-shaped configuration to effectively pulverize the metallic feed material while disposing the arbor outside of the interior of the cutting chamber. The inventor discovered that this design substantially inhibits galling and smearing. Applicant notes that none of the references mention, much less teach, the comminution of metal, the difficulties relating to the generation of heat, or galling or smearing or methods to prevent it. Absent such teachings or suggestions, there exists no motivation to combine the cited references to solve the problem of

galling and smearing of metallic feed material in a comminution device. Thus, Applicant respectfully requests that the rejection be withdrawn.

In fact, the sole source of motivation that is relied upon to combine the references appears to be from the Applicant's disclosure itself, which is impermissible hindsight. As stated in the MPEP § 2145, such an argument for obviousness may not include "knowledge gleaned only from applicant's disclosure," *In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971). The claimed invention operates by both increasing efficiency of comminution AND decreasing the likelihood that the hot metallic feed material will gall or smear. The problem (and its solution) is only disclosed in the Applicant's specification, and, thus, the motivation to combine the references comes solely from the Applicant's disclosure.

Applicant notes that each of claims 2, 4, 5, 10, and 11 ultimately depend from claim 1. As such, the subject matter of these dependent claims is similarly patentable over the cited references for the reasons stated above. Further, there is no motivation to combine any of the references because none teach or suggest a reason to combine the disclosed elements to provide an apparatus adapted for the comminution of metallic feed material. Thus, it is respectfully requested that the rejection be withdrawn.

B. Rejection of claims 3, 7, and 8 under 35 U.S.C. § 103(a)

Claims 3, 7, and 8 are rejected under 35 U.S.C. § 103(a) as having been obvious over the '304 patent, in view of the '126 patent, and further in view of U.S. Patent No. 2,853,247 to Anderson, U.S. Patent No. 4,221, 341 to Schymura *et al.*, and U.S. Patent No. 4,641,787 to Petersen *et al.*

As discussed *supra*, the '304 and '126 patents may not be relied upon in the present rejection because they are non-analogous art, there is no motivation to combine these references, and impermissible hindsight is used to form a rationale for their combination. Applicant notes that claims 3, 5, and 7 ultimately depend from claim 1. The additional citation of art in the present rejection does not cure the deficiency of improperly relying on the '304 and '126 patents. Thus, there is no further motivation to combine Anderson, Schymura, and Peterson as none teach or suggest a reason to combine all of the elements for the comminution of metal, much less how to comminute metal without galling or smearing. Thus, it is respectfully requested that the rejection be withdrawn.

C. Rejection of claims 6 and 9 under 35 U.S.C. § 103(a)

Claims 6 and 9 are rejected under 35 U.S.C. § 103(a) as having been obvious over U.S. Patent No. 6,827,304 to Rousseau in view of U.S. Patent No. 4,678,126 to Prentice *et al.* (the '126 patent, as recited *supra*), and further in view of U.S. Patent No. 6,666,395 to Cavalieri and U.S. Patent No. 361,000 to Creager.

As discussed *supra*, the '304 and '126 patents are not properly relied upon because both are non-analogous art, there is no motivation to combine these references, and impermissible hindsight is used as a rationale for the combination. Further, claims 6 and 9 are dependent on claim 1 and, thus, are similarly non-obvious. However, assuming only for the sake of argument that one may properly rely upon and combine the references, there is no motivation to further combine the additional elements disclosed in Cavalieri (a vegetable dicer) or Creager (a clay pulverizer)

because the references also are not directed to the comminution of metallic feed material, and, notably, vegetable and clay materials would not gall and smear like certain metallic materials. Thus, there is no teaching or suggestion that such elements could be or should be combined to solve the problems disclosed by the Applicant.

CONCLUSION

Applicant submits that claims 1-11 of the present invention are both novel and non-obvious. The cited references do not teach or suggest the claimed device or processes, either alone or in combination. In view of the foregoing, Applicant respectfully submits that the subject application is in condition for allowance. Accordingly, reconsideration of the rejections and allowance of claims 1-11 at an early date are earnestly solicited. If the undersigned can be of assistance to the Examiner in addressing issues to advance the application to allowance, please contact the undersigned at the number set forth below.

Respectfully submitted,

3/31/06
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